

# (12) UK Patent Application (19) GB (11) 2 052 695 A

(21) Application No 8015862  
(22) Date of filing 13 May 1980  
(30) Priority data  
(31) 7915552  
(32) 18 Jun 1979  
(33) France (FR)  
(43) Application published  
28 Jan 1981  
(51) INT CL<sup>3</sup>  
F41H 7/02  
(52) Domestic classification  
F3C MA  
(56) Documents cited  
GB 1475362  
GB 1342196  
GB 1334825  
GB 1225212  
GB 495022  
GB 223571  
(58) Field of search  
F3C  
(71) Applicant  
Paul Legueu, 85 Avenue  
de Mazy, 44380  
Pornichet, France  
(72) Inventor  
Paul Legueu  
(74) Agent  
Marks & Clerk

## (54) A Light Reconnaissance or Patrol Vehicle

(57) The vehicle comprises an armoured lower cup-shaped body part (1). The body part (1) is formed of

deflecting walls (4) and serves as a chassis for supporting, on the outside, driving means, axles, suspensions and shock-absorbers. An upper body part 2 extends across at least a part of the lower body part (1).

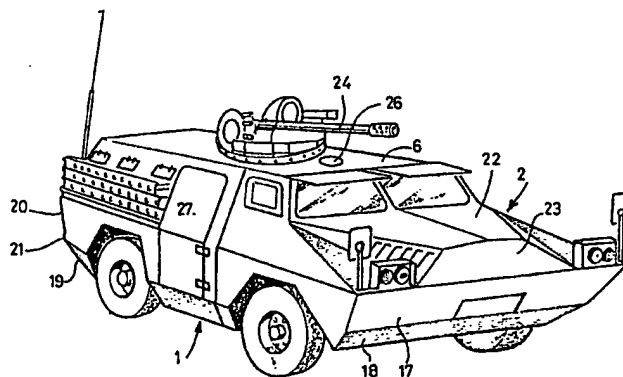


FIG.1

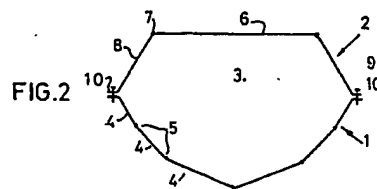


FIG.2

GB2 052 695 A



2/2

FIG.3

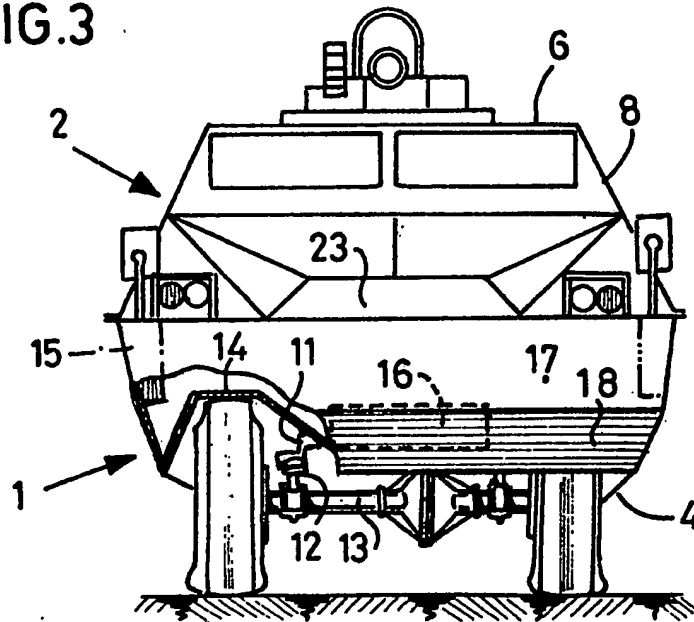


FIG.4

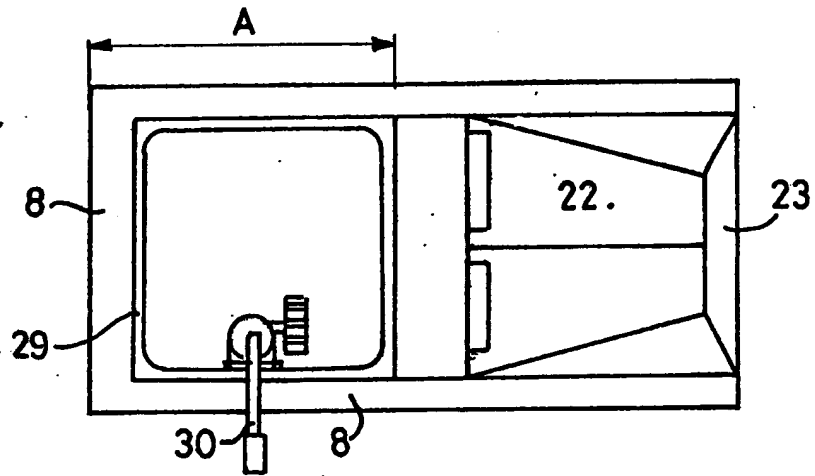
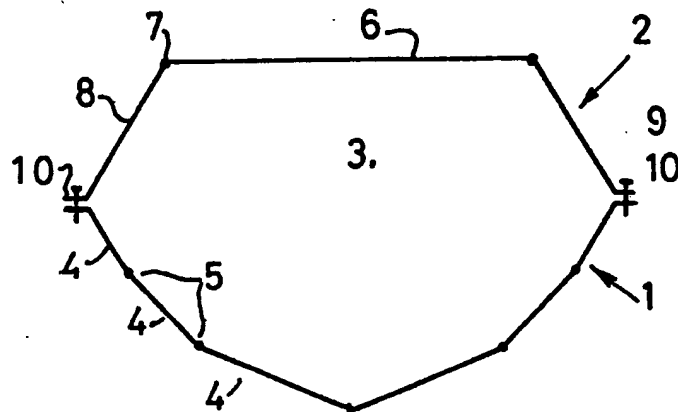


FIG.2



## SPECIFICATION

## A Light Reconnaissance or Patrol Vehicle

The invention relates to a light reconnaissance or patrol vehicle suitable for military purposes for the opening up of routes or the reconnaissance of ground, said vehicles having a certain autonomy so as to be capable of travelling in desert regions or regions which are poorly equipped as concerns supplies and services.

The present invention more particularly relates to a vehicle having a light armour of sheet steel 5 to 6cms thick, this armour being in the form of two superimposed shells which renders the vehicle practically invulnerable to projectiles of combat arms and mine explosions.

The invention provides a light reconnaissance or patrol vehicle comprising an armoured cup-shaped lower body part, which is formed of deflecting walls and which serves as a chassis for supporting on the outside, driving means, axles, suspensions and shock-absorbers, and an upper body part extending across at least a part of the lower body part.

Preferably, the armoured lower body part comprises planar metal strips connected together along adjacent longitudinal edges, said strips being inclined with respect to each other and diverging outwardly of the vehicle so as to outwardly deflect projectiles and mine splinters or fragments.

Conveniently, the armoured lower body part comprises a base, two lateral walls connected to the base, each lateral wall comprising two strips inclined at different angles relative to the base and welded together along adjacent longitudinal edges, a front end wall and a rear end wall, the lateral front and rear end walls being welded to the base and diverging from said base.

Conveniently, the upper and lower body parts each have a flange, the two flanges being secured together.

Advantageously, spring support lugs for supporting suspension and shock-absorbing means and anchoring points for mounting driving parts of the vehicle are secured to the outer surface of the lower body part.

Preferably, the upper body has a substantially frustoconical section, a roof being welded to two inclined lateral walls, the lower edges of which are provided with a flange, the front and rear end walls being also inclined so as to constitute deflecting walls.

Conveniently, the upper body part is provided with an opening extending over substantially the entire rear part of the roof thereof, said opening being provided with a guide track for a heavy fire arm.

Preferably, fuel and carburetant tanks are disposed inside the lower body part.

The invention will now be more particularly described, by way of example with reference to the accompanying drawings, wherein:—

Figure 1 is a perspective view of one

embodiment of a vehicle according to the invention;

Figure 2 is a diagrammatic view illustrating the two superimposed body parts forming the vehicle;

Figure 3 is a cross-sectional view of the vehicle in the region of the front wheels; and

Figure 4 is a plan view of a modified version of the vehicle.

The vehicle illustrated in Figure 1 is designed to travel in reputedly dangerous regions i.e. on terrain on which the enemy may be hidden or in passages which might be mined, and must not be likened to a combat tank, since it differs from the latter with regard to its speed of travel, its lightness, its mobility and its dimensions.

The vehicle comprises as shown diagrammatically in Figure 2, a shell consisting of two cup-shaped body parts 1 and 2, the second of which is inverted and disposed above the first to define a closed space 3 constituting an inner compartment of the vehicle.

The body part 1 is formed of deflecting walls constituting divergent surfaces which outwardly deflect mine fragments or splinters coming into contact with these deflecting walls and comprises planar strips 4 of steel plate 5 to 6 cms thick.

These strips are welded to each other at 5 along adjacent longitudinal edges. Each wall of the body 1 has a different inclination relative to its adjoining wall or walls so that there is no region of the shell which is exposed perpendicularly to lateral projectiles or vertical fragments or splinters (in the upward direction).

The body part 2 is in a form of a frustoconical shell having a roof 6 to which sides 8 are connected by welds 7. The sides 8 are inclined outwardly of the vehicle so that, here again, these sides form deflecting walls for lateral projectiles.

The strips of metal forming each of these two body parts are assembled by arc-welding so that the cladding of the vehicle is hermetic and strong.

The two body parts 1 and 2 have flanges 10 and are assembled together by bolts and nuts 9 which extend through flanges 10.

As shown in Figure 3, the body part 1 may serve as a chassis for supporting driving means (transfer boxes, gear boxes, differentials, axles, etc.). In this case, spring mounted lugs 11 are secured to the outside of the body part 1 for mounting suspension leaf-springs 12 for an axle 13. The body part 1 has wheel passages 14 and these allow for the required movement of the suspension arrangements and shock-absorbers.

In this embodiment, all of the driving means are external to the body part 1 and they are sufficiently strongly protected for resisting projectiles. However, carburetant and fuel tanks 15 are disposed inside the shell. The fuel tanks 15 are fixed to the lateral walls of the body and a water tank 16 is fixed to the floor which is planar in the presently described embodiment. These tanks are located in the rear part A of the vehicle compartment and the front part of the

compartment is adapted to receive the driver and the gunner.

The body part 1 is, as previously mentioned, formed of strips 4 constituting its base and its lateral sides. The front end of the body part 1 is formed of two welded steel plates 17, 18 which are inclined outwardly of the vehicle, so as to constitute deflecting walls, and the rear end is also formed of two steel plates 19, 20 welded together at 21 and diverging outwardly so as to form deflecting walls.

The upper body 2 includes a substantially trapezoidal hood 22 whose front end 23 is inclined as is more particularly shown in Figure 4.

The roof 6 has a machine-gun 24 mounted on a turret 25 and an opening 26 for the passage of an arm for defence against aircraft (A.A.). Access to the compartment of the vehicle is obtained by way of side doors 27 which extend across the body parts 1 and 2, these doors being also armoured similarly to the rest of the cladding of the vehicle.

The upper body part 2 may cover the whole of the vehicle as shown in Figure 1 or be open at the rear as shown in Figure 4. In this latter case, the rear part 28 of the vehicle is completely uncovered and the opening is bordered by a guide track 29 in the well known form of a slideway. Rolling means, supporting a machine-gun 30, is arranged for movement in the slideway, so that the machine-gun 30 can be moved along the entire length of the guide track 29 around the periphery of the opening.

This vehicle is equipped with all the driving, observation and detection means usually mounted on this type of vehicle, and the wheels have solid non-deflatable tyres.

This multi-face vehicle is by design and shape relatively invulnerable to the projectiles of combat arms and to mine splinters or fragments.

#### Claims

1. A light reconnaissance or patrol vehicle comprising an armoured cup-shaped lower body part, which is formed of deflecting walls and which serves as a chassis for supporting on the outside, driving means, axles, suspensions and shock-absorbers, and an upper body part

extending across at least a part of the lower body part.

2. A vehicle as claimed in claim 1, wherein the armoured lower body part comprises planar metal strips connected together along adjacent longitudinal edges, said strips being inclined with respect to each other and diverging outwardly of the vehicle so as to outwardly deflect projectiles and mine splinters or fragments.

3. A vehicle as claimed in claim 2, wherein the armoured lower body part comprises a base, two lateral walls connected to the base, each lateral wall comprising two strips inclined at different angles relative to the base and welded together along adjacent longitudinal edges, a front end wall and a rear end wall, the lateral, front and rear end walls being welded to the base and diverging from said base.

4. A vehicle as claimed in any one of the preceding claims, wherein the upper and lower body parts each have a flange assembly, two flanges being secured together.

5. A vehicle as claimed in any one of the preceding claims, wherein spring support lugs for supporting suspension and shock-absorbing means and anchoring points for mounting driving parts of the vehicle are secured to the outer surface of the lower body part.

6. A vehicle as claimed in any one of the preceding claims, wherein the upper body has a substantially frustoconical section, a roof being welded to two inclined lateral walls the lower edges of which are provided with a flange, the front and rear end walls being also inclined so as to constitute deflecting walls.

7. A vehicle as claimed in claim 6, wherein the upper body part is provided with an opening extending over substantially the entire rear part of the roof thereof, said opening being provided with a guide track for a heavy fire arm.

8. A vehicle as claimed in any one of the preceding claims, wherein fuel and carburetant tanks are disposed inside the lower body part.

9. A light reconnaissance or patrol vehicle substantially as hereinbefore described with reference to and as shown in Figures 1 and 3 or Figures 1 and 3 as modified by Figure 2 or Figure

4.